Wisconsin Urban & Community Forests

A Quarterly Newsletter of the Wisconsin Department of Natural Resources, Forestry Division

Technology You Can Use

by Jill Mahon, Coordinator
Midwest Center for Urban Forestry
USDA Forest Service
St Paul, MN

Personal Digital Assistants (like Palm Pilots) are small, hand-held computers that were originally developed to replace the popular (but oh-so-bulky) planner. These electronic organizers are wallet-sized, but provide a way to carry around the names and addresses of everyone you've ever met. At the same time, they house your calendar, to-do lists, memos and even reminder notes. Many allow you to surf the Net and send e-mails, all while sitting in a doctor's office or in your truck before leaving a job site. And now there are units that integrate with mobile phones, digital cameras and GPS units.

Why are we talking about these pocket organizers in an urban forestry newsletter? Because recent advances in this technology have made it possible to store other types of information on these small computers…information like inventory data, GIS map layers, work orders and equipment maintenance schedules.

And since we urban forest managers, nursery managers and arborists are oftentimes bouncing between our desk and the field, or from one location in the field to another, having an easy way to record and access key information while on the go can save time and money.

PDAs allow information to be entered and accessed on either a desktop or hand-held computer (or both). A system of two-way communication ensures that all file changes will be updated in both places so that, no matter where you are working, you have access to the latest information. This process, called synchronization, takes place by plugging the PDA into the desktop computer and pressing a button. In a matter of minutes, files on both computers are made current and identical. You specify which files and information you would like to carry with you on the hand-held unit.

Dear Clipboard: It's Been Nice Knowing You

One of the greatest uses of PDAs in urban forestry lies in field data collection. Inventory data, hazard risk assessments and storm damage estimates can all be recorded on PDAs and then downloaded into a spreadsheet, database or GIS program.

PDA software programs make it easy to develop on-screen forms for data entry. Instead of writing out street names or remembering codes, street names can simply be picked from a drop-down list. No more trying to interpret handwriting or having to sort through pages and pages of data.

Once entered, this information can easily be retrieved and even edited. The city of Burlington, Vermont, for example, sends a PDA out with the tree crew so that their tree inventory has a work log associated with it. As work is completed, the arborists record what was done and subsequent changes in the condition or hazard risk rating of the tree. At the end of the day, the hand-held is plugged into the office computer, and less than two minutes later the main database has been updated, reflecting new trees planted, old trees removed and any maintenance activities completed on the previously inventoried trees. Up-to-date summary reports can then be generated for accomplishment reporting, budget estimates and future work orders.

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Register Now!

The 2004 Wisconsin Urban Forestry Conference has cutting-edge presentations for community leaders and city engineers as well as tree managers. Check out page 5 for a preview, then register right away!

WISCONSIN DEPT. OF NATURAL RESOURCES

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Inside this issue:

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Community Profile:
Tree City USA: 2001, 2002
Population: 7765
Street Trees: about 1500
Total Managed Acres: 21

Program Profile:
Staff: Mike Martin, Public Works Director
Tree Board: Ecology & Solid Waste Committee

Forestry Budget:
$5000

Community Profile:

Village of Hales Corners

by Kristina Skowronski
DNR Southeast Region

The village of Hales Corners, incorporated in 1952, is situated on 3.5 square miles in the southwest corner of Milwaukee County. Prior to 1960 the area was largely agricultural. Now that same area is home to a community with a thriving urban forest with a street tree population of 1479. With less than 15 acres of open space suitable for future development, the department of public works and contracted service providers actively maintain 21 acres of medians, parks, open space and other village-owned lands.

The village has an Ecology and Solid Waste Committee, which serves as the local tree board and makes recommendations to the board of trustees. This board consists of six resident volunteers, one village trustee and the director of the Department of Public Works. In 1995, this committee contracted with Arbor Associates (now Wachtel Tree Science and Service) to collect data for a street tree inventory and prepare a strategic management plan. This plan has since been the guide for all forestry management activities. In 2000, Wachtel Tree Science and Service updated the street tree inventory and proposed to update the management plan. As a result, the village of Hales Corners has an updated inventory and management plan in place. A future goal is to re-inventory and migrate the data into a modern database.

Photo by WDNR

In 1996, the board of trustees accepted a resolution that modified the municipal code to include an ordinance entitled Forestry Planting and Maintenance. This ordinance sets regulations for the preservation and planting of trees in developed areas. Further revisions were adopted in 2001 to provide requirements for landscaping and tree preservation during construction.

The village of Hales Corners initially obtained Tree City USA status in 2001. Since then the village has held three Arbor Day celebrations which have included tree planting demonstrations and lectures, seedling distribution, and distribution of urban forestry information pamphlets.

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Articles, news items, photos and ideas are welcome.

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Project Profile:

You Scratch My Back and I'll Scratch Yours

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by Don Kissinger
DNR West Central Region

In the late 1960s, the village of Gilman in Taylor County performed a Main Street reconstruction project that had tree planting as a major component. The project garnered this community of just under 500 people a state Main Street Beautification Award and came in second nationally to Honolulu, Hawaii. This planting consisted of green ash and crabapple trees installed in 4-by-4-foot concrete cutouts, or "boxouts," along the main thoroughfare of town. The trees did quite nicely for a number of years until the root systems had no more room to expand and started buckling the curb and sidewalk.

Several years after the cracking of the concrete infrastructure, the village was advised to create a continuous rooting area the entire length of each street. The village did not feel that could be done, but did receive an urban forestry grant that enabled them to enlarge the boxouts to two to three times their former size. This helped to some extent, but because the concrete sides were no longer in place to hold the root-bound trees, a ball-and-socket effect was created. The trees began to lean, with one falling completely over.

As a result, in 2002 the village chose to replant all of the boxouts. Again they sought advice from their DNR urban forestry coordinator who, with the help of Ron Zillmer, Mid-State Technical College instructor, put together a plan to remove the trees and create the best possible planting medium for a tough situation. The boxouts had been widened, but needed to be retrofitted with drainage since most boxouts hold too much water, retarding root growth and encouraging disease problems.

The village purchased a lot of 4"-diameter drain tile, many yards of 1/2" to 2" stone and landscape fabric. The high school horticulture class assembled the materials to form a French drain system and then installed it using equipment donated by a local business. Next came planting day.

In late October of 2002, Zillmer and his urban forestry lab of a dozen or so students, along with at least that many residents, planted the trees. The Mid-State class could finally put their hours of book learning and practice planting to the test in a real-life application. Japanese tree lilac, ginkgo and Autumn Purple white ash were planted in the boxouts and disease tolerant elms were planted in grass boulevards adjacent to the business area. All told, these 35 trees were planted in a matter of two hours by teams of residents and students. After the work and cleanup were finished, all participants were treated to a luncheon sponsored by Lewan's IGA of Gilman.

Funding for the project was provided by a memorial tree campaign started by Tree Board Chair Cindy Day. Donations of $125 per tree entitled the donor to a labeled post placed at the planting site commemorating the person of their choice. The campaign was so successful that there were more trees than boxouts available, which allowed the planting of the elms on the adjacent boulevards.

Though this planting did not win a Main Street Beautification Award, it did bring home the International Society of Arboriculture's Gold Leaf Award for Landscape Beautification, presented to Gilman at the 2003 Wisconsin urban forestry conference. In the end, this project enlisted and helped many folks. The high school students learned how to properly prepare a tree planting site in difficult conditions, the college students got some practical experience and residents not only learned how to plant trees, but will hopefully be able to enjoy the fruits of many people's labor for quite some time.

Auguring the widened boxouts to put in French drains and perimeter drain tile for aeration.

Photos by Coreen Webster, Village of Gilman

Ron Zillmer and his Mid-State class demonstrating proper planting technique.

Technology You Can Use

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Other applications for urban forestry include asset management, contact/client data management, and management of service requests, work orders and sales calls.

The idea of portable computers is not new. Urban forestry consultants have been collecting field data on pen-based computers for over a decade, and laptops enable us to work on many projects while away from the office. But at less than $200 apiece, PDAs now provide an even more affordable way to collect and retrieve information while in the field. They are smaller, lighter, require less (or no) pre-programming and have added features not previously available from pen computers. Some have add-on software that enables use like a laptop for word processing or database applications. Unlike a laptop, however, you don't need to wait for a machine to boot up or shut down. PDAs instantly turn on and off, returning you to where you last left off.

PDA Primer

There are two main types of PDAs that are currently suitable for urban forestry-related applications—those that run on the Palm operating system and those that run on the Pocket PC. This is similar to the difference between Windows and MacIntosh operating systems. You can do virtually the same with each, but the software from one rarely talks to the other. To help decide which operating system is best for you, consider the following:

- Palm-powered units tend to be smaller, less expensive and lighter (although there are now many Pocket PC models that match the Palm in size and weight). They traditionally have a better battery life, but come with less built-in memory.
- Pocket PCs have traditionally had flashier color screens (although Palm now offers several units with high-resolution screens). They mimic Windows operating systems so may be more intuitive for some to use, have more multimedia features and have better GIS capabilities.

If you intend to use the PDA primarily for entering and downloading data without needing to access it later on (so you are continuously freeing up space on the hand-held each time you download), a Palm may be the best value. This is the case for most inventory and hazard risk data collection. Palm-powered units are also appropriate if you are going to maintain only subsets or small databases on the hand-held. If you need to purchase several hand-helds, the less expensive Palm-powered units may be more appealing.

On the other hand, if you anticipate the need to carry large quantities of data with you (e.g., more than 2000 inventory records), the Pocket PC will generally run faster and store more. This is true for GIS mapping as well—the Pocket PC is a more suitable system for displaying aerial photographs and other map layers.

The address book, calendar and other organizational capabilities of the Palm and Pocket PC are comparable.

Other features to consider when selecting a hand-held include:

Monochrome vs. Color Screen. Color screens are nice…very nice. But they do tend to wear down the battery more than a monochrome. For use in the field, battery life is precious. However, like computer monitors, fewer and fewer monochrome models are on the market.

Battery Type. Removable batteries are handy for field use because if you're getting low on power, you can replace them very easily without having to interrupt your work. If the battery is a fixed, rechargeable battery, you may have to call it a day or at least take a break to recharge. (Average battery life is around six hours for continuous use.)

Storage Capacity. The range of available memory is 2 to 64 MB. For basic data entry 8 MB will suffice. If you are going to be carrying large amounts of data on the hand-held or displaying maps or aerial photos, you will need more.

Expansion Slot. You can expand the storage capacity of the PDA if you purchase a unit that has an expansion slot and memory card. (See "Accessories" below.)

GIS Mapping Capability. There are GPS units that attach to most PDAs, enabling data collection of GPS points and seamless integration into existing database applications already on the hand-held unit. Add-on GIS software also provides a way to display GIS map layers and even digitize tree locations on the hand-held.

Accessories: Memory or Backup Card. Removable memory cards are the size of a postage stamp and insert into the PDA's expansion slot. These can be used to store additional data or to back up the contents of the PDA in between times that you synchronize with a computer. If you're going to be collecting a lot of data all day long without synchronizing, a backup card (around $50) may prove invaluable.

Accessories: Case. Because PDAs were not originally designed for field use, they are packaged in a sleek, but fairly fragile shell. And they are not waterproof. If you're going to be using a PDA in the field, it would be a good idea to invest in a substantial protective case. Several crush-proof, waterproof cases are on the market for about $50.

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Don't Miss the 2004 Wisconsin Urban Forestry Conference!

Another great urban forestry conference is right around the corner, February 1–3, 2004, at the Regency Suites and KI Convention Center in Green Bay. Here's a preview of what to expect:

• **Urban Forest Technology Workshops**. Various new gadgets and products are available to help tree managers do their job better. Workshops will feature the latest in efficient and affordable urban forest technology. Experience the practical applications of cutting-edge tools such as Personal Digital Assistants (PDAs) through **hands-on exercises**! *Sponsored by the Wisconsin Urban Forestry Council.*

• **New and Ongoing Threats to Urban Forest Health**. Find out what you can do to proactively deal with some very important threats to Wisconsin's urban forests. Get the basics as well as research updates on emerald ash borer, sudden oak death and oak wilt.

• **Trees Are Good for Business**. Internationally recognized expert Dr. Kathleen Wolf (Center for Urban Horticulture, University of Washington) will present her compelling work linking city trees with an enhanced business climate. Find out how environmental benefits are valued and how quality of life issues affect local economies.

• **Trees and Parking Lots: Codes for Success**. Dr. Wolf will also report on environmental issues associated with big, unshaded parking lots. She will share examples of successful codes and ordinances that incorporate trees into parking lot design.

• **Urban Tree Risk Management**. Communities of all sizes contend with the issue of tree risk. The USDA Forest Service has developed practical and economical methods for managing the risk. The methods are detailed in a new, photo-packed guide to help tree managers identify, prevent and correct hazardous defects in trees and develop sound tree risk policy. Participants will receive a complimentary CD version of the guide.

• **Tree Management Topics for the 21st Century**. Today's municipal tree manager is called upon to know more and do more than simply plant, maintain and remove trees. Take advantage of these slightly-off-the-beaten-path presentations featuring some new and exciting uses of urban vegetation:

Prairies in a Community Setting – Looking for an alternative to traditional, high-maintenance landscapes? Learn tried-and-true techniques to create and manage everything from small prairie gardens to large meadows in a variety of community settings.

Phytoremediation: Using Greenfields to Clean Brownfields – Green plants are increasingly being used to clean up contaminated sites. Hear about the diverse applications of this "growing" technology.

Reducing Urban Runoff with Rain Gardens – Rain gardens can be a valuable part of the stormwater management solution in developed and developing areas. This session will focus on the how-to aspects as well as costs of designing, constructing and planting rain gardens. Participants will leave with an instruction manual. It's a great follow-up to Larry Coffman's introduction to the concept at last year's conference.

The urban forestry conference is again co-sponsored with Wisconsin Arborist Association in conjunction with the WAA Annual Conference and Trade Show. Arborist sessions running concurrent with many of the urban forestry offerings will include winter tree identification, tree growth regulator research and applications, tree breeding for the Midwest, and hot tips on new products and practices.

For conference registration information contact Brian Cassity, 262-886-5224, or download the program announcement from our Web site at www.dnr.state.wi.us/org/land/forestry/uf/.

See you there!

Technology You Can Use

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Software. PDAs come with software for many basic applications like an address book, calendar and notes. Additional software may be necessary to transfer data between commonly used PC programs and a handheld. These go-between programs for spreadsheets and databases are fairly inexpensive (less than $100), but more sophisticated programs for GIS mapping range from $500 to $1000. Many consultants have their own data collection systems for PDAs specifically tailored for urban forestry applications, and there are some free programs available for basic, entry-level needs.

For more information

If you would like to learn more about the use of PDAs in urban forestry applications and get your hands on the devices, be sure to register for the pre-conference workshop "Technology in Urban Forestry" at the Wisconsin urban forestry conference, February 1st.

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Community Tree Profile:

Serbian spruce (Picea omorika)

by Laura G. Jull
Dept. of Horticulture
University of Wisconsin–Madison

Native To: Southeastern Europe, on limestone-based mountains

Mature Height: 50–60' tall; can grow larger in native habitat.

Spread: 20–25' (narrow for an evergreen tree)

Form: Narrow, pyramidal form, with short, arching to ascending branches. Drooping lower branches have upswept ends that resemble a ski-jump-like form. Branches also have drooping branchlets, creating a very graceful form.

The narrow form and upswept branches of Serbian spruce.

Photo by Dick Rideout, WDNR

Growth Rate: Slow to moderate

Foliage: Evergreen leaves are needle-like, flat (atypical for a spruce), spirally arranged around the stem, pointed, 1/2–1" long, sharp to the touch and directed forward on upper sides of branchlets. Upper surface of needles are glossy and dark green; undersides have two distinct, white stomatal bands running down the needle. Needles are attached to the stem by a sterigma (little woody peg).

Buds and Stems: Globose to rounded, dark brown buds, non-resinous, with papery bud scales. Stems are light brown on newer growth.

Fall Color: None; evergreen species.

Cones: Monoecious (separate male and female strobili borne on one tree); 1 1/4–2 1/2" long, 1/2–3/4" wide, oblong to ovoid, pendulous on the branches, with papery, flaky, thin cone scales. Cones are purple when young, turning cinnamon brown when mature. Cones are persistent on the tree, then eventually fall to the ground intact. Not a litter problem.

Bark: Thin, flaky to scaly, coffee-brown

Site Requirements: Prefers rich, deep, moist, well-drained soils, but Serbian spruce is pH adaptable, heat tolerant and somewhat drought tolerant. Prefers full sun; in northern climates it prefers to be out of direct winter winds.

Hardiness Zone: 4a

Insect & Disease Problems: Aphids, spruce budworm, bagworm, spruce needle miner, spider mites, shoot borers, needle casts, but is generally pest free.

Suggested Applications: More suited for residential landscapes due to its narrow, graceful form, unlike Norway spruce (*Picea abies*) or blue Colorado spruce (*Picea pungens* f. *glauca*) which get very wide with age. Serbian spruce can be an excellent specimen tree that can also be used in masses or as a screen. Very ornamental tree in the landscape when site conditions are suitable.

Limitations: Does not make a good Christmas tree as needles are sharp and fall quickly when brought indoors. Sensitive to road salt. Needs some protection from direct wind in northern climates as it can winter burn in a site too exposed.

Comments: Serbian spruce is a beautiful evergreen tree for landscaping in residential and commercial landscapes. It is an excellent substitute to the over-used, pest-prone blue Colorado spruce. Requires less space than other spruces due to its narrow habit. Low-maintenance tree.

Common Cultivars or Selections: There are a few cultivars; some are not commercially available, but these two are available:

'Nana': dwarf form, 8–10' tall; tighter branching; dense, conical to globose form; bright green needles are closely arranged on the branch with upswept twigs showing the whitish underside of the needles; lacks the drooping branchlets.

'Pendula': elegant, weeping form; used as a specimen tree.

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Plants that Merit Attention: Vol. 1 Trees, 1984, The Garden Club of America, Janet Meakin Poor, (ed.), Timber Press, Portland, OR.

Trees for Urban and Suburban Landscapes, 1997, by Edward F. Gilman, Delmar Publishers, Albany, NY.

Trees of the Northern United States and Canada, 1995, by John L. Farrar, Iowa State Univ. Press, Ames, IA.

Urban Tree Health Matters:

Conditions Right for "Conditional" Canker Diseases

7

by Glen R. Stanosz, Ph.D., Professor
Department of Plant Pathology
University of Wisconsin–Madison

Canker diseases are caused by many different fungi that invade the bark, cambium and outer sapwood of the twigs, branches and main stems of trees. The killing of these tissues results in the symptom called a canker, which is the dead, often discolored, swollen or sunken, and cracked area of a stem. Some cankers expand rapidly up and down stems and grow around (or girdle) stems, resulting in death of all portions beyond the canker. Other cankers are localized and may be surrounded by healthy tissue called callus. Some canker pathogens aggressively attack and damage otherwise healthy trees. Many others are common on trees already subjected to factors that have adversely affected tree condition. Such "conditional" canker diseases are likely to become more prevalent and have severe impacts on Wisconsin's street and landscape trees stressed by the 2003 summer drought.

Conditional canker diseases (also referred to as saprobic canker diseases) often are caused by fungi that might normally be considered weak pathogens. In the otherwise healthy tree, these fungi might not cause disease, or produce only the most minor symptoms such as occasional twig death. When trees are grown outside their natural ranges, planted in poor sites, exposed to extremes in heat or cold, or subjected to defoliation or prolonged drought, however, they may be more aggressively attacked. The tree adversely affected by one of these conditions may be altered to become a better substrate for the growth of the fungus, or morphological and chemical resistance responses may be suppressed. Thus, the "weak" pathogen appears to become more aggressive and induces cankers that cause defect, dieback and even tree death.

A very large number and great variety of fungi associated with street and landscape trees are conditional canker disease pathogens. Several *Cytospora* and *Fusarium* species induce cankers of spruces and other conifers, poplars and willows, and maples, for example. *Phomopsis* species attack a wide range of trees from Douglas-fir to junipers to Russian olive. Diseases caused by numerous *Sphaeropsis, Diplodia* and *Fusicoccum* species cause diebacks of conifers and hardwoods, especially following drought or defoliation.

Identification of the cause of a particular conditional canker disease can be a challenge. Many conditional canker pathogens produce their fruiting bodies in abundance on portions of stems they have colonized and killed. These fruiting bodies are usually quite small, however, and may take considerable practice to notice in the field, even with a hand lens. Nonpathogenic fungi also very quickly colonize and produce fruiting bodies in dead tissues. Therefore, microscopic examination of spores from these reproductive structures often is necessary to confirm the presence and identity of the pathogen. Contact your local government, university or private tree health expert for advice and assistance.

Regardless of the particular pathogen involved, several common measures can be taken to avoid conditional canker diseases and ameliorate their effects on trees. Treatments with fungicides are not usually practical or highly effective in preventing these diseases. But because the fungi that cause conditional canker diseases are responsive to tree condition, choice of species or cultivar, site selection and planting preparation are very important. Trees should be well adapted to the region and particular location, and provided with adequate room for growth

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What Damaged This Tree?

Photo by WDNR

Turn to page 15 to find out...

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Volunteer Newsletters: What Can They Do for You?

compiled by Don Kissinger, DNR West Central District, from "Best of Nonprofit Nuts & Bolts" in the Free Articles section of Nuts & Bolts Publishing Inc.'s Web site, www.nutsbolts.com.

You have this group of folks on your tree board who perform the lion's share of the work and are diligent about making meetings, and you have others who are, well, let's just say not as committed. Your group needs to find some more resources, some new people and some fresh ideas.

All of these situations can be addressed by creating or adding to your current newsletter format or including tree board/committee activities in your community, county or regional newsletter to let others know about your good works and upcoming events.

When writing a newsletter geared to your volunteers and/or the community it serves, use a shotgun approach to capture a bit of everyone's interests, such as:

Human interest stories. Highlight successful case studies or projects. Showcase the unique talents of some of your volunteers. Interview them along with clients and community members. No matter how you approach the human-interest story, your goal should be to give a concrete example of how volunteers truly make a difference and how your group could not function without them.

Achievements. Keep everyone abreast of your accomplishments by providing statistics, such as how many trees have been improved by specific maintenance practices, number of volunteer hours donated, what percentage of your budget goes directly to your program, etc. It is important to steer the reader to actual sites within your community where they can see firsthand the good work being done.

Wish List. Don't hide your needs. Include your organization's needs in every single issue. To avoid repetition, try focusing on different aspects of your needs in each issue. For example, focus on available volunteer opportunities in one issue. In the next issue, list the office equipment you might need. In another issue highlight the funds needed to implement a new program.

Events. Recap past events to show how much money you raised or trees you planted, maintained or protected and to thank your supporters. But devote even more editorial space to upcoming events. Why? This post-event publicity will generate enthusiasm and hopefully help boost attendance and participation in the future.

Wrap-up of meeting minutes. To gain better effort from all committee or board members list the highlights of meeting minutes, emphasizing what projects or actions were assigned to specific individuals. Keep a running total of meeting attendance for the year. This quasi-public record helps make members accountable and, if seen by the whole committee or community, will help members give of themselves more fully.

Gaining New Members. State tasks that need to be completed and necessary background to successfully perform the work along with project manager contact information. Do this so potential new members will realize they won't be expected to go at it alone and that future assignments may have increased roles for them. People are more apt to volunteer if they are not put on the spot right away when joining a group.

By incorporating these concepts into your newsletter, more and bigger projects can be accomplished. Try it and see.

Coming Events

February 1–3, 2004 — *DNR Annual Urban Forestry Conference and Wisconsin Arborist Association Annual Conference and Trade Show*, Regency Suites and KI Convention Center, Green Bay, WI. Contact Brian Cassity, 262-886-5224 or casitree@hotmail.com.

March 29–31, 2004 — *Trees & Utilities National Conference*, Embassy Suites Downtown/Old Market, Omaha, NE. Contact the National Arbor Day Foundation at 402-474-5655, www.arborday.org/programs/Conferences.html or conferences@arborday.org.

April 3, 2004 — *Firewise Workshop*, YMCA Camp Alexander, Wisconsin Rapids, WI. Contact: Jolene Ackerman at 608-267-7677 or jolene.ackerman@dnr.state.wi.us.

What's on the DNR Urban Forestry Web Site?

by Kristina Skowronski
DNR Southeast Region

Have you ever wanted information on urban forestry, but didn't know where to find what you were looking for? Have you tried our DNR Urban Forestry Web site lately? Chances are you might be just a click away from having exactly what you need! Check out our Web site today, at www.dnr.state.wi.us/org/land/forestry/uf/.

Here you can access a wide array of on-line information. You can find information covering many aspects of our grant program, from grant guidelines to an up-to-date list of urban forestry consultants available to hire for grant projects. You can also find grant forms and project ideas, and links to help you find a certified arborist in your area. You can find a description of the assistance available to your community through the DNR urban forestry program as well as contact information for the urban forestry coordinator in your region.

There are many links to other urban forestry resources. The last six volumes of *Wisconsin Urban and Community Forests* newsletter are on-line, as well as information about publications on topics from new tree planting to tree board member responsibilities. You can also find details of Wisconsin's Champion Tree Program, including measuring and nominating instructions, a list of champion tree inspectors and all of Wisconsin's champion trees.

If you're interested in Tree City USA, check out the Tree City pages on our Web site. Here you will find a history of Tree City USA awards in the state and photos of the community award presentations at the 2003 statewide celebration. If you're not yet a Tree City USA, you can easily find out the requirements and download the application forms to become a Tree City!

If you're wondering what the Urban Forestry Council is all about, you can find that out too on the council's pages. Now you can stay up-to-date on current council topics or simply look up the purpose, by-laws or membership of the council.

And don't forget to double-check your calendar while you're on our Web site to make sure you don't miss any upcoming events, both state- and nationwide! These include DNR workshops and conferences, and various classes offered by professional associations and other organizations. So next time you're on-line searching for urban forestry information, click on the Wisconsin DNR Urban Forestry home page and find out what we're all about.

Conditions Right for "Conditional" Canker Diseases

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(especially root growth) in good soil. An adequate supply of water is especially important before, during and after transplanting. Protection from defoliating insects and diseases, and supplemental watering during prolonged droughts will avoid development of stress that stimulates conditional canker pathogens. Unnecessary nitrogen fertilization, which can stimulate activity of some conditional canker pathogens in trees and alter the balance between shoot growth and root growth, should be avoided. If these diseases occur, sanitation pruning is necessary to eliminate the fungus and production of inoculum for further spread within the affected tree and to nearby trees. To avoid spread of fungal spores, pruning should be done in dry weather and tools should be surface-disinfected between cuts. Affected stems should be removed by cleanly cutting them at least six inches below any diseased wood and removed from the site for burning or burial.

April 22, 2004 — *Building with Trees Seminar*, Minneapolis/St. Paul, MN. Contact the National Arbor Day Foundation at 402-474-5655, www.arborday.org/programs/Conferences.html or conferences@arborday.org.

April 22–23, 2004 — *Municipal Engineering Fundamentals for Non-engineers*, Madison Concourse Hotel, Madison, WI. Contact 608-462-0876, http://epdweb.engr.wisc.edu/webF682 or custserv@epd.engr.wisc.edu.

June 28–30, 2004 — *Community Forestry at Its Best*, Lied Lodge and Conference Center, Nebraska City, NE. Contact the National Arbor Day Foundation at 402-474-5655, www.arborday.org/programs/Conferences.html or conferences@arborday.org.

August 7–11, 2004 — *International Society of Arboriculture Annual Conference and Trade Show*, Pittsburgh, PA. Contact Jessica Marx at 217-355-9411 ext. 24, jmarx@isa-arbor.com or www.isa-arbor.com.

If there is a meeting, conference, workshop or other event you would like listed here, please contact Dick Rideout at 608-267-0843 with the information.

Urban Forest Insect Pests:

Caterpillars or Sawflies?

by Linda Williams, Forest Health Specialist
DNR Northeast Region

Introduced pine sawfly.

Did you ever find a group of caterpillars feeding on pine trees in your yard? The next time you find some be sure to look closely—they might be sawflies instead of caterpillars.

Pine-feeding sawflies will feed on both native and exotic species of pines and have the potential to seriously defoliate your tree. Sawfly larvae often feed in groups and look similar to naked caterpillars, but sawflies turn into wasp-like insects, and caterpillars, as you know, turn into moths or butterflies. Caterpillars are often solitary feeders while many sawflies feed in groups, defoliating entire branches. Sawflies are referred to as either spring sawflies or summer sawflies, depending on the time of year that they emerge from the egg. On pines here in Wisconsin you'll see European pine sawfly, jack pine sawfly and red pine sawfly early in the spring, and you might find redheaded pine sawfly, white pine sawfly and introduced pine sawfly on your trees later in the year.

Photos by Linda Williams, WDNR

Red-headed pine sawfly.

It's important to determine if you have caterpillars or sawflies on your trees because some insecticides that work well against butterfly and moth caterpillars don't work at all on sawflies. To tell the difference between the two, count the number of fleshy prolegs located on the abdomen, but don't count the true legs near the insect's head. If there are two to five pairs of prolegs then you're looking at a caterpillar; if there are more than five pairs of prolegs you have a sawfly. Sawfly control can be quite easy if you're not queasy—simply clip the branch that the sawflies are on and squish the sawflies under foot. And remember sawflies start out small and grow as they eat, so look closely to find them when they're still young.

America in Bloom Honors Communities

Columbus, OH — America in Bloom is a national campaign and contest that promotes community enhancement through beautification. In the friendly competition, communities are matched by population and evaluated on their efforts related to floral displays, urban forestry, landscaped areas, turf and groundcover, tidiness, environmental awareness, heritage conservation and community involvement. Judges visited 36 communities this summer and the awards were presented during a banquet at the Hyatt Regency in Chicago.

Chicago was the grand winner of AIB's largest population category last year and has won the unaffiliated Nations in Bloom contest this year.

AIB's 2003 population category winners are:

- 5,000 or less ..... Lewes, DE
- 5,001–10,000 ..... Warwick, NY
- 10,001–15,000 ..... Brecksville, OH
- 15,001–20,000 ..... Berea, OH
- 20,001–25,000 ..... Batavia, IL
- 25,001–50,000 ..... Lake Oswego, OR
- 50,001–100,000 ..... Reston, VA
- 100,001–300,000 ..... Akron, OH
- 500,001–1,000,000 ..... Indianapolis, IN
- 1,000,001 or greater ..... Columbus, OH

Four special awards were presented to communities that received high marks out of all contestants in all population categories. These include:

- Ball Horticultural Co. Floral Displays Award — Lake Oswego, OR
- Proven Winners Landscaped Areas Award — Brecksville, OH
- Communities in Bloom Community Involvement Award — Indianapolis, IN
- The Scotts Co. Turf & Groundcover Areas Award — Glen Ellyn, IL

Plans are underway for the 2004 edition of AIB. The deadline for communities to register is March 31. For more information contact AIB's administrator Laura Kunkle at 614-487-1117, fax 614-487-1216, e-mail lkunkle@ofa.org or visit AIB's Web site, www.americainbloom.org.

Urban Wildlife:

Gulls

by Ricky Lien
DNR Urban Wildlife Specialist

I've written a couple articles on the issues surrounding management of urban deer and geese in Wisconsin. One of the advantages we have in dealing with these two species is that there's a long tradition of hunting them in Wisconsin and they're exceedingly edible. Even in those urban situations in which we remove either of these species by means other than by hunting, we can play up the fact that the meat that results is utilized by willing consumers. What happens when we run into problems with an abundant animal that hasn't traditionally been hunted in Wisconsin and can't be eaten?

Gulls in Wisconsin are increasingly causing problems at marinas, airports, beaches, landfills and even on factory rooftops. While there are 23 gull species in North America, only five are considered common in Wisconsin. And of these five, two—the herring gull and the ring-billed gull—are the most common and widespread. But they weren't always as numerous as they appear today. Sam Robbins, in his book *Wisconsin Birdlife*, noted that the ring-billed gull was until recently only known as a non-breeding summer resident, mainly along the Great Lakes shorelines. However, bird watchers noted increasing numbers, possibly resulting from movement of Michigan birds. Consider that from 1976–1990, the nesting population of ring-billed gulls in the nearby Canadian portion of the lower Great Lakes increased from 56,000 pairs to 283,000 pairs, a 500 percent growth!

So what problems can these gulls cause? From an ecological perspective, gulls can be predators of other bird species. Burgeoning populations of gulls can mean problems for other species. More obvious to many are the problems gulls cause for people. Gulls are involved with more collisions with airplanes than any other species. If you don't think this is a serious issue, would you like to volunteer to sit in a jet when a gull gets ingested into its engine? We can't and won't take risks with wildlife around airports. Gulls near beaches have been suspected as contributors to beach closings by virtue of human pathogens that may be found at high levels in their droppings. And of course gulls can just plain be a nuisance if it's your marina, park or rooftop that they decide to loaf at.

There are a variety of methods that can be used to abate gull problems. Remember that all gulls are protected by federal law, and any lethal control of gulls or destruction of eggs requires a federal permit.

Don't feed gulls. One of the easiest forms of gull nuisance abatement to implement is to not let anybody feed gulls in areas where they're a problem. Just like deer and geese, gulls key in to food handouts and they can congregate at the free buffet.

Exclusion. Exclusion of gulls from problem areas such as landfills or prime nesting locations can provide relief not only for the exclusion zone, but also for adjacent areas. One common method of exclusion is the use of wires or monofilament lines hung in parallel lines that are 15 to 40 feet apart. One study found that even in the presence of an attractive food source, wires spaced 15 feet apart were successful in excluding gulls.

Habitat modification. Gulls need food, nesting and resting sites, and water. Removing any or all of these items may result in reduced gull numbers. Gulls are extremely adaptable at taking advantage of numerous food sources, so it can be difficult to remove all items they might eat. But it may be helpful to eliminate or modify some of the more obvious food sources to which gulls might habituate—landfills, fish docks, sewage outlets and others. Vegetation can be manipulated to discourage gulls. Interestingly, grass that's grown to a height of 8 inches will discourage laughing gulls (a relatively rare species in Wisconsin), but herring gulls can see over it, so taller grass is needed to discourage them. Going to a drastic extreme in the category of habitat modification, one company which was experiencing gull problems filled a pond, bulldozed the surrounding vegetation and developed the main gull colony nesting site as a storage site for company materials.

Scare methods. Scare devices that have been used to alleviate gull problems include pyrotechnic shells, gas-powered exploders, broadcasts of gull distress calls, and even the use of trained raptors or radio-controlled airplanes. For all of these methods the key to success appears to be persistence and knowledgeable use. It's been found that many distress and alarm calls are species specific and may even be specific to

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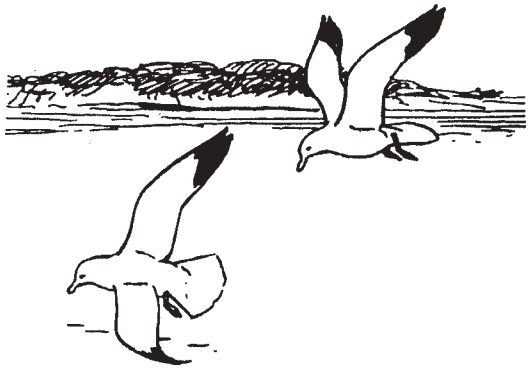

Organization Profile:

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Wisconsin Center for Environmental Education

compiled by Jessica Schmidt
DNR Northeast Region

The Wisconsin Center for Environmental Education was established in 1990 to assist in the development, dissemination, implementation and evaluation of environmental education programs focusing on elementary and secondary schoolteachers and students. The WCEE works to improve environmental education throughout the state of Wisconsin.

WCEE is part of the University of Wisconsin–Stevens Point, College of Natural Resources. It maintains a core staff of 17 people and works with over 50 faculty members in various disciplines within the college.

The goals of the Wisconsin Center for Environmental Education are:

- develop, offer and evaluate graduate and undergraduate courses in environmental education
- collaborate and develop partnerships with agencies, organizations and institutions on the development, implementation, evaluation and recognition of environmental education programs to benefit the state of Wisconsin
- develop and conduct environmental needs assessments and program evaluations
- develop and conduct environmental literacy assessments of Wisconsin's students and teachers
- maintain an environmental resource center for use by educators

WCEE is the home of six active programs serving environmental educators and students throughout the state. These programs are summarized below:

Environmental Education Resources Library. WCEE maintains a centrally located environmental education resources library for use by teachers in Wisconsin. The library is located in the Learning Resources Center on the UWSP campus.

Extended MS in Environmental Education for Teachers. This is a professional development program for practicing teachers to earn their MS in Natural Resources/Environmental Education. It is designed for K–12 teachers and offers on-line and weekend courses held year-round. It is the only MS in environmental education for teachers offered in Wisconsin.

High School Conference on the Environment. Each year WCEE sponsors an environmental action conference just for high school students and teachers.

LEAF—Wisconsin K–12 Forestry Education Program. This is a partnership between Wisconsin DNR Division of Forestry and WCEE. The mission of this new program is to improve and increase forestry education in Wisconsin's K–12 schools. An activity guide has been developed and is available by contacting WCEE.

Wisconsin Environmental Education Network. This is an association of schools and cooperating statewide agencies dedicated to promoting environmental education in Wisconsin. Each participating school has a liaison that disseminates EE information received through the network.

KEEP—Wisconsin K–12 Energy Education Program. KEEP was created to help promote energy education. KEEP is a collaborative effort of the WCEE and Focus on Energy. To date, KEEP has successfully reached over 1800 teachers throughout the state with its graduate-level in-service course and high-quality materials. These resources have helped increase the quality and quantity of energy education for over 70,000 K–12 students in Wisconsin.

The Wisconsin Center for Environmental Education has much to offer teachers and students throughout the state. For inquiries on any of these programs or for more information on WCEE please contact them at 715-346-4973 or wcee@uwsp.edu.

This information was adapted from the WCEE Web site, www.uwsp.edu/cnr/wcee/index.htm.

The mission of the Wisconsin Center for Environmental Education (WCEE) is to promote, develop, disseminate, implement, and evaluate environmental education programs for K-12 teachers and students in Wisconsin.

The Idea Exchange...

compiled by Jessica Schmidt
DNR Northeast Region

Missouri Launches New Anti-topping Campaign
"Experts Agree Don't Top Your Tree," the anti-tree-topping campaign developed by Forest ReLeaf of Missouri, the Missouri Community Forestry Council and 501creative, is now available for use by your organization. All materials can be customized to include your logo and contact information and can be printed in quantities to fit your needs. The campaign includes a brochure titled, "Think of It as a Really, Really Bad Haircut . . . Which Could Kill You," an 11-by-17-inch poster, a series of ads for local newspapers and a pocket folder that can be used with the media and other audiences. These materials are available for a nominal fee that will be used to support continued anti-topping efforts in Missouri. *Info: Visit* www.501creative.com/topping *or contact Karen Handelman at 314-863-0501 ext. 28.*

Marketing Urban Forestry
The Center for Urban Forest Research has a well-done marketing publication called *Planting the Seeds of Success, Marketing the Community Forest*. It can be downloaded as a pdf at: http://wcufre.ucdavis.edu/products/1/cufr_161.pdf.

Massachusetts Carbon Dioxide Mitigation Partnership
Commissioner Peter C. Webber of the Massachusetts Department of Environmental Management and representatives from the Calpine Corporation, one of the nation's leading power producers, have announced a new partnership to reduce greenhouse gas emissions. The partnership will plant trees in communities across the state. The Calpine Corporation presented the Mass ReLeaf program with a check for $171,000 to develop a three-year, tree planting program as a major part of the company's carbon dioxide mitigation efforts. Carbon dioxide is the main gas responsible for global warming. Both parties acknowledge that tree planting is an effective means to reduce the adverse effects carbon dioxide has on our environment. *Info: Contact state coordinator Eric Seaborn at Eric.Seaborn@state.ma.us.*

Kids' Perspective of Urban Forests
A new interactive CD-ROM titled *The Forest Where Ashley Lives* is now available from Iowa State University Extension. The CD contains a version for teachers and students, including many urban forestry publications and activities. An on-line version of the book can be viewed at www.extension.iastate.edu/Publications/PM1812.pdf.

Resources for Urban Tree Risk Management
Urban Tree Risk Management: A Community Guide to Program Design and Implementation is now on-line at www.na.fs.fed.us/spfo/pubs/uf/utrmm. This fully illustrated, easy-to-read training manual is designed to improve public safety and protect tree health by assisting communities to design, adopt and implement tree risk management programs. The manual can also aid in training field staff to detect, assess and correct hazardous defects in urban trees.

Does your community or organization have an idea, project or information that may be beneficial to others? Please let your regional urban forestry coordinator know. We will print as many of these as we can. If you see ideas you like here, give the contact person a call. They may be able to help you in your urban forestry efforts.

Research Notes:

Homeowners' Opinions on the Practice and Effects of Topping Trees

by David D. Close, John W. Groninger, Jean C. Mangun and Paul L. Roth

Tree topping continues to be a common practice despite the efforts of various anti-topping advertising campaigns. A survey was conducted to gain insight into homeowner motivations and knowledge of the consequences of topping, whether topping is consumer or service driven, and whether socio-demographics are related to levels of satisfaction with topping. Results indicate that topping is viewed more favorably by less educated homeowners, is consumer driven and that people do not understand the consequences of topping. Differences also were apparent between voluntary and involuntary (utility) topping with the latter group more likely to recognize the negative effects of topping on tree health. Future anti-topping, advertising campaign creators should use information from this study to direct their message toward the most appropriate audiences.

Reference: *Journal of Arboriculture 27(3):160–165. 2001*

Council News:

Food for Thought

by Jeff Edgar, Chair
Wisconsin Urban Forestry Council

Council Chair Jeff Edgar

Photo by Silver Creek Nurseries

We've all heard that "an army travels on its stomach" or "the way to a man's heart is through his stomach." It is also said "man does not live on bread alone." Now that's something we can chew on!

Our October urban forestry council meeting, which was held at the state capitol, focused on our direction and ideas—the "bread" of any organization. "Chew your food well before swallowing," they always say, which is exactly what the council has been up to lately.

We began our meeting with some hors d'oeuvres (ideas) on how to start and maintain a relationship with our legislators. Paul Heinen, DNR Policy Initiatives Advisor, and Tim Gary, an aide to State Representative Donald Friske, served the ideas up.

In past meetings and for our homework, council members had been given a menu of about 150 action items and goals to help direct the council's and the DNR's actions. After scrutinizing the choices, we finally decided what to order for our future.

The council's first course began with a request to DNR to develop a comprehensive public awareness plan within six months, and to implement that within nine months. The council felt that too many people have a great lack of knowledge about urban forestry issues. A plan will enable the DNR and the council to help educate the public about these issues.

This was quickly followed by our main course, which will put something of substance on our plates. The council will be focusing its energies to promote urban forestry to the public. Our audience will be our legislators, local government leaders, the professional community, people of color and philanthropic donors. Whew! But we weren't full yet!

For dessert, each council member was asked to spend some time visiting with his or her local legislators. We spent the rest of the afternoon meeting with our individual legislators and letting them know of our connection to the urban forestry council. We are hoping to become the citizen experts which the legislators will look to for advice on urban forestry issues.

You'd think after a heavy meeting like this all the council members would be due for a diet. Even though we are gluttons for punishment I think we have also made healthy menu choices, so a diet won't be one of our issues. We now have something to sink our teeth into. Bon appétit!

Treesaregood.com

Treesaregood.com was created by the International Society of Arboriculture to provide quality arboriculture (tree care) related information to the general public. ISA's mission is to educate and help the public acquire an understanding of the importance of proper tree care.

An excellent source for obtaining information on specific topics and finding answers to questions, www.treesaregood.com provides unlimited access to:

- extensive on-line series of tree care brochures for the general public
- links to professional and outside resources
- fun facts about trees
- FAQs
- discussion groups
- ISA press releases
- membership information
- regional chapter contact information

In addition to these resources, www.treesaregood.com provides a way to locate one of the more than 15,000 ISA certified arborists by zip code. A certified arborist can answer specific questions and provide professional assistance to the public on the care of trees. The site also provides certification information for those interested in becoming a certified arborist. By attaining certification, members receive discounts on ISA certification, meetings, conferences and educational materials, as well as research on new techniques and a professional identity.

While there are many resources for professional arborists, www.treesaregood.com also contains many consumer-related resources and educational material that could be included on the shelves of any home library!

Check out www.treesaregood.com for your one-stop destination to free, quality tree care information today!

The International Society of Arboriculture is a nonprofit organization supporting tree care research around the world.

Urban Forestry Resources:

Tree Planting

compiled by Cindy Casey
DNR West Central Region

Prepare for spring with these tree planting references!

Creating the Urban Forest: The Bare Root Method — Cornell Urban Horticulture Institute has done considerable work with bare-root tree planting techniques. Methods, guidelines, training materials and more are included in this on-line resource, available at www.hort.cornell.edu/department/faculty/bassuk/uhi/outreach/pdfs/bareroot.pdf.

The University of Florida Horticulture Department's Web site contains much of the information from Dr. Ed Gilman's *Trees for Urban and Suburban Landscapes*. In addition to nuts-and-bolts technical information, the site features specifications for nursery stock as well as a sample spec. Visit http://hort.ifas.ufl.edu/woody/planting/.

The Community Tree Planting Guide — This practical, thorough, easy-to-use resource covers technical aspects of tree planting as well as tips for managing a planting project. The guide was produced by the Tree Trust (Minnesota) and funded by the Midwest Center for Urban and Community Forestry. It is available on-line at the USDA Forest Service St. Paul Field Office Web site, www.na.fs.fed.us/spfo/pubs/uf/treeguidehtm/intro.htm.

Gulls

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local dialects. Prolonged use may lead to familiarity. Gulls that have habituated to an area can be the most difficult to scare away. However, some studies suggest that if persistent scaring is able to displace gulls from an area, it becomes easier each succeeding year to keep the gulls away. It should be noted that gulls will recolonize an area shortly after scare methods are suspended. Regarding the efficacy of scare methods, an established colony is harder to break up than a new one, and any scare program is more effective if it is implemented as soon as gulls arrive.

Shooting. Under certain conditions and implemented in a knowledgeable way, shooting gulls can be highly selective and useful. Shooting alone is not very useful for dealing with large numbers of gulls due to the small number of gulls that can be shot, but it can be useful as a means to reinforce ancillary scare techniques.

Egg and nest destruction. Repeated and thorough egg destruction can prove effective in preventing chicks from hatching but doesn't eliminate a gull colony because the adult birds continue to reside there and gulls from other sites may be attracted.

For at least the short term it appears gull numbers in Wisconsin will continue to grow and communities will need to be prepared to deal with the problems they might cause. Some problems might be curtailed by wise decision-making as urban areas are developed. Think about what might be drawn to man-made ponds. Might gulls or geese be attracted to large expanses of manicured lawns that often show up in new developments?

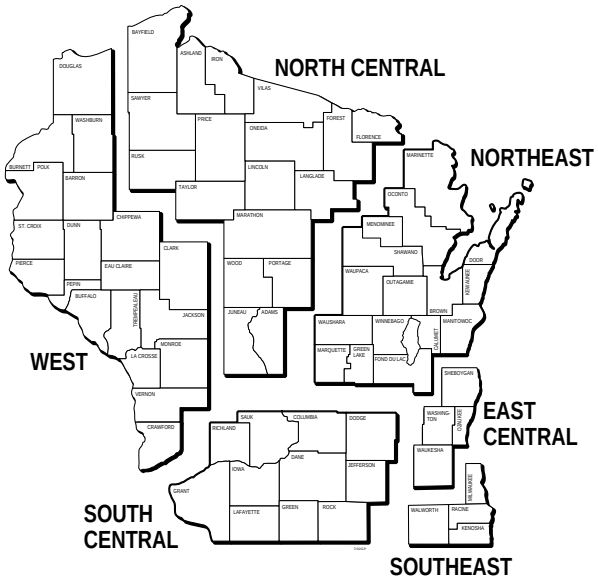
And be proactive. Studies indicate that scare methods are most effective when gull colonies are young and not well established. Scaring the gulls away early on or using exclusion methods to keep them out of areas they aren't welcome may be cheaper and less controversial in the long run when compared to the use of lethal control or egg destruction that may be needed at established colonies.

What Damaged This Tree?

Answer: A deer. As urban and suburban areas continue to spread—and with them the resulting loss of hunting to control deer numbers—you can expect deer to continue to look at landscaping as a preferred food source. *This information is courtesy of Ricky Lien, DNR urban wildlife specialist.*

Do you have pictures of tree damage others ought to know about? Send them to Kim Sebastian (address on page 16) and we'll print them here!

Wisconsin DNR Urban and Community Forestry Contacts



World Wide Web Site: www.dnr.state.wi.us/org/land/forestry/uf/

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